

FIG. 1

The diagram shows a power electronic circuit with the following components and labels:

- 10**: Points to the overall circuit.
- 16**: Points to the input voltage source V_{in} .
- 36**: Points to the primary winding of the transformer, labeled $N_s (N_s > N_p)$.
- 40**: Points to the secondary winding of the transformer, labeled N_p .
- 38**: Points to the inductor L_m in the secondary winding.
- 32**: Points to the MOSFET switch S .
- 34**: Points to the output diode D_o .
- 22**: Points to the output load resistor R and output voltage V_o .
- 20**: Points to the output diode D_s .

Currents are labeled as I_m (magnetizing current), I_k (peak current), I_{os} (output current), and I_{oo} (output current).

FIG. 2

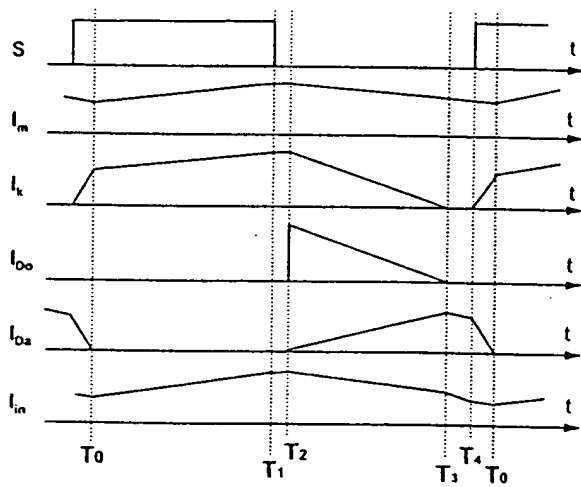
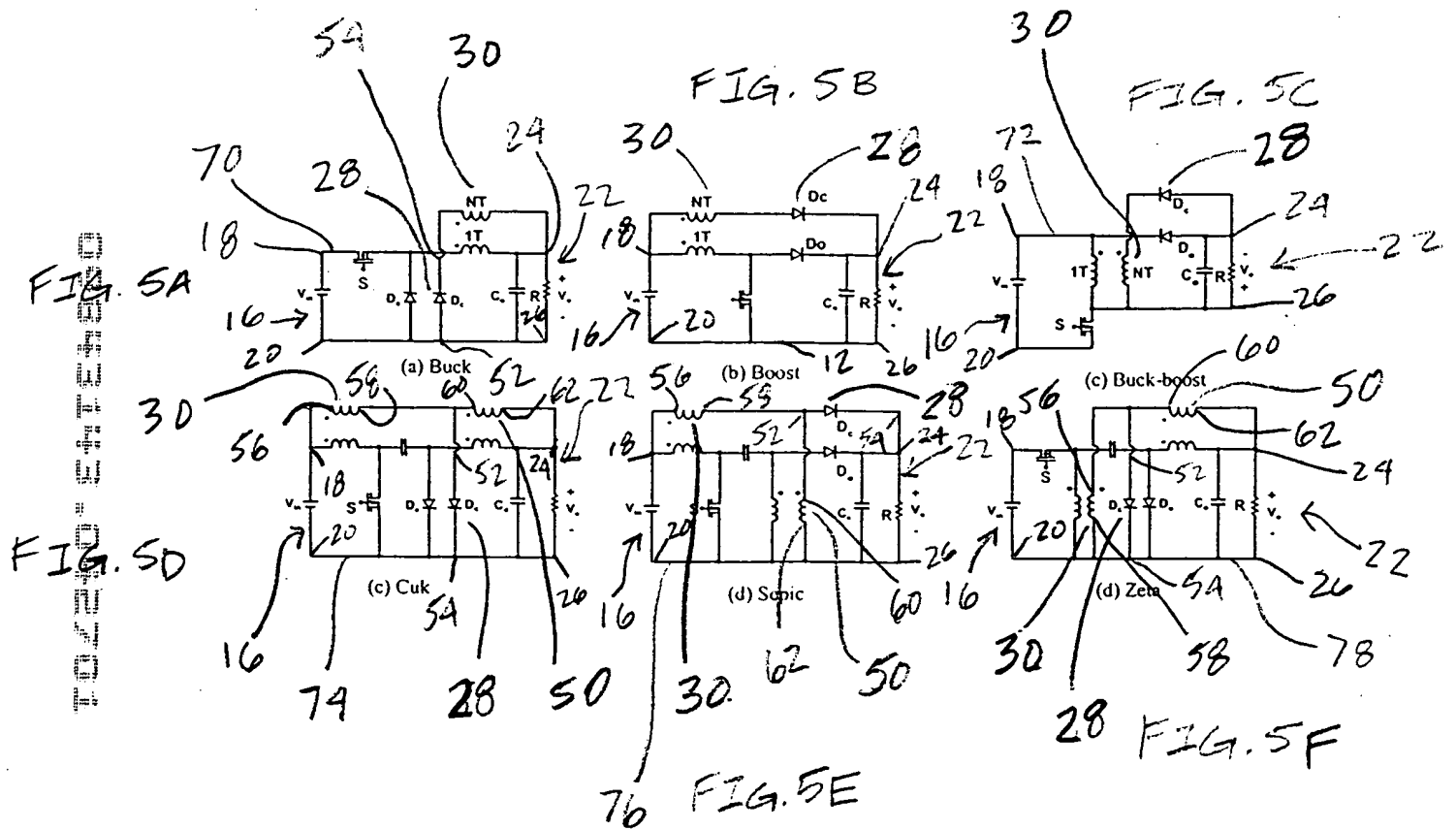


FIG.3



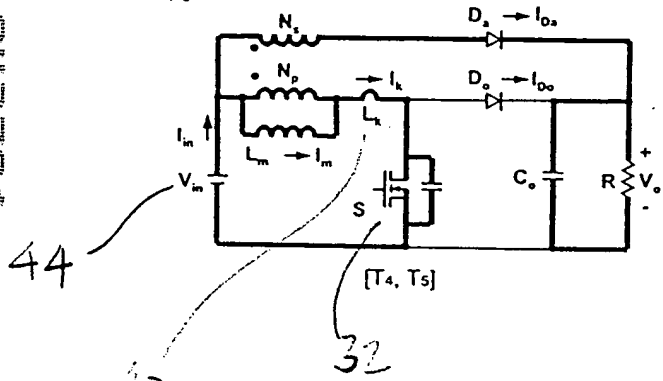
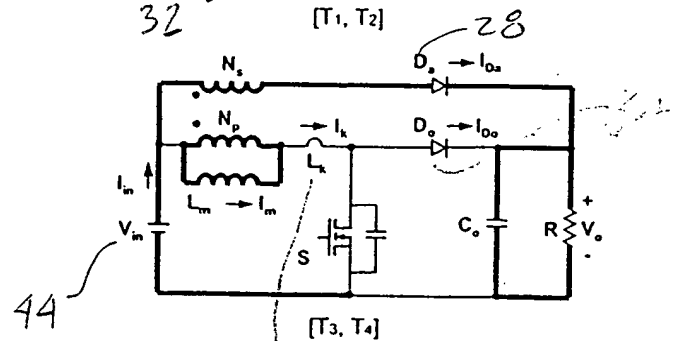
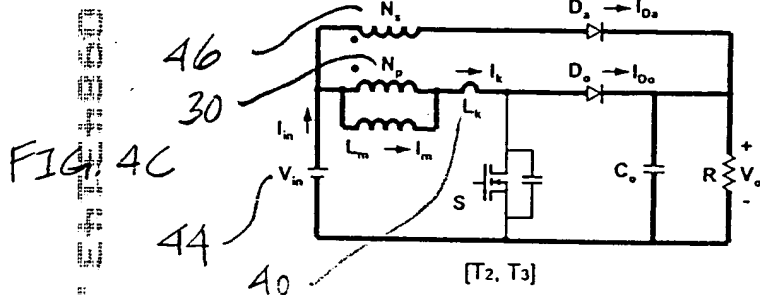
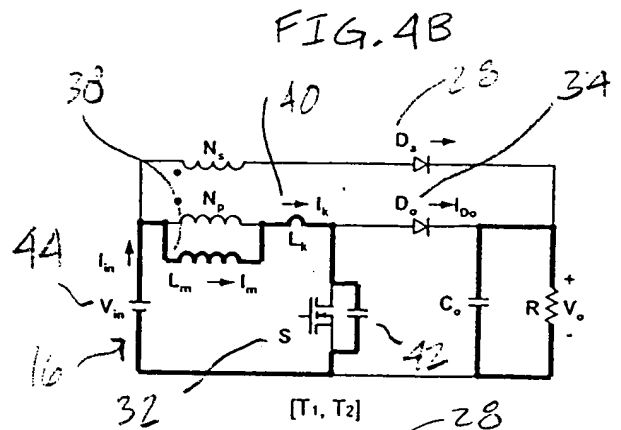
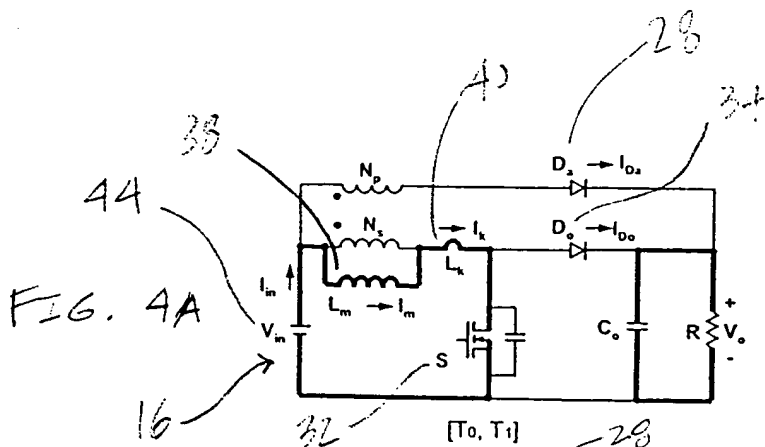


FIG. 4E

FIG. 4D

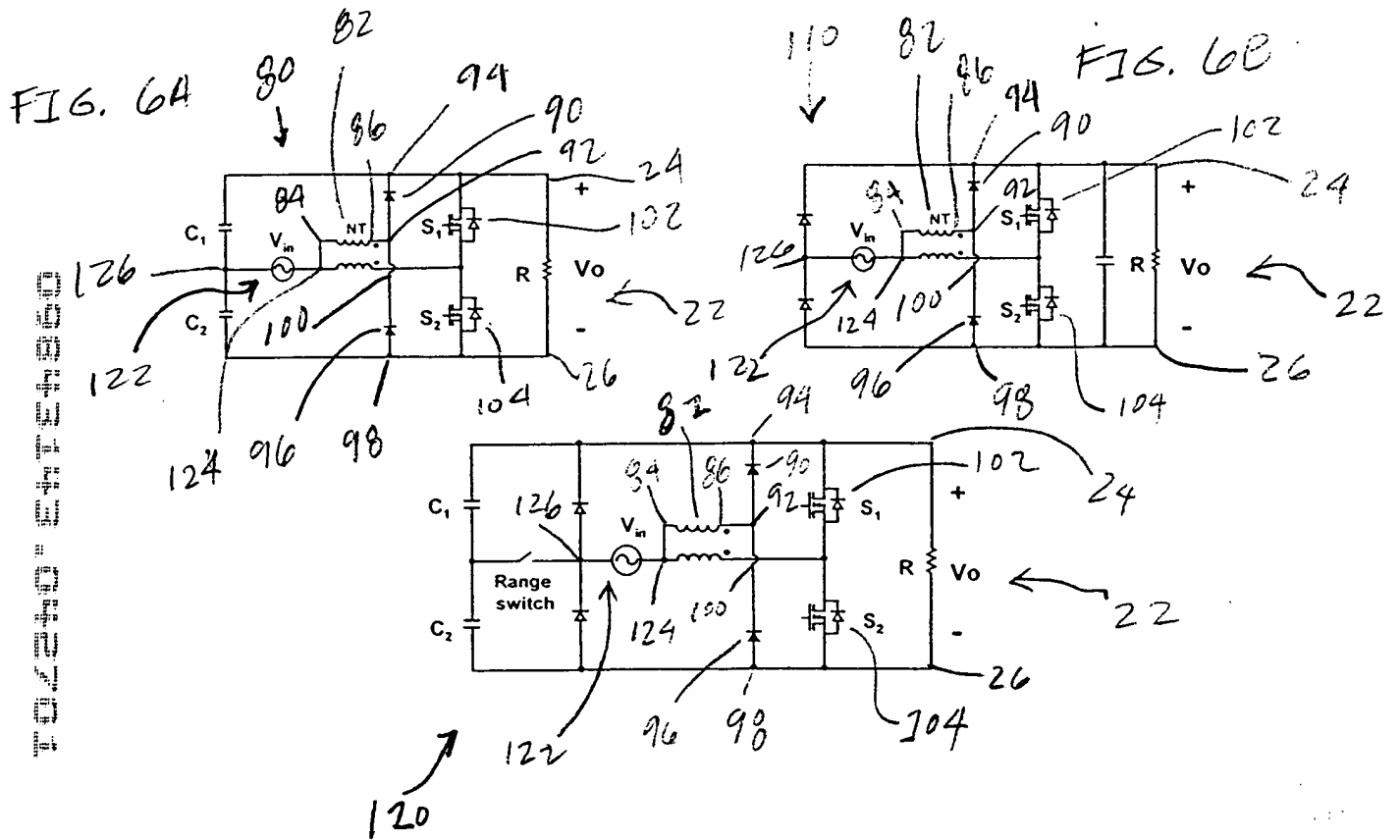


FIG 6C

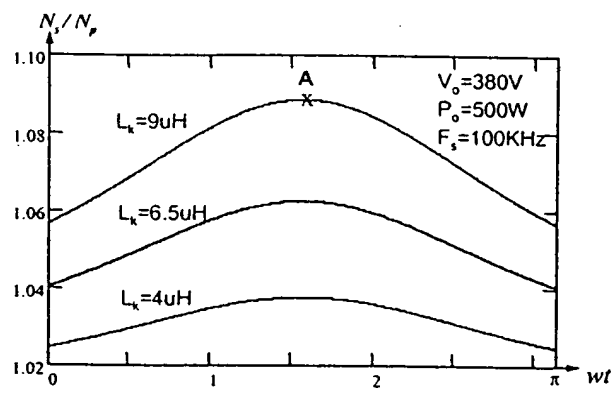


FIG. 7

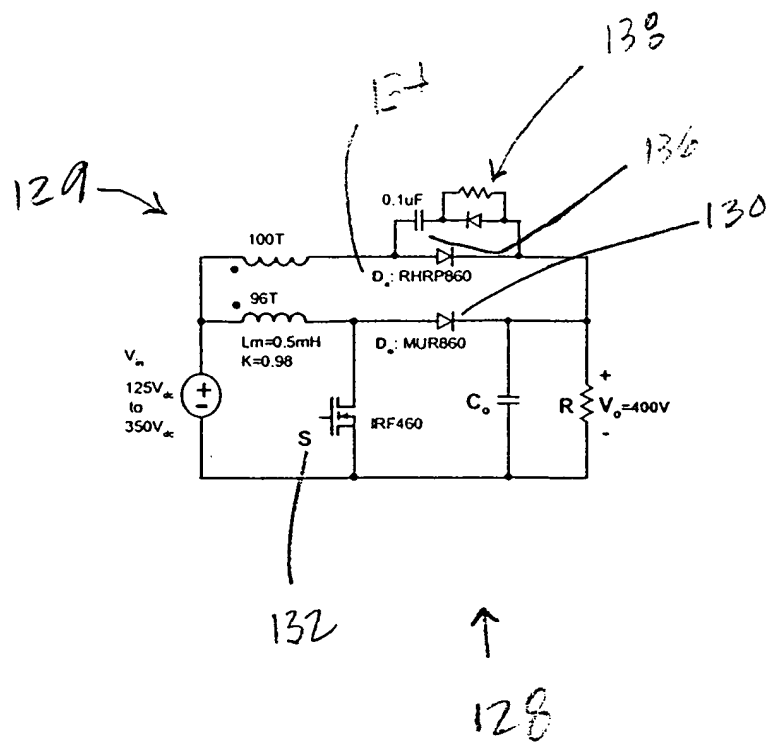


FIG. 8

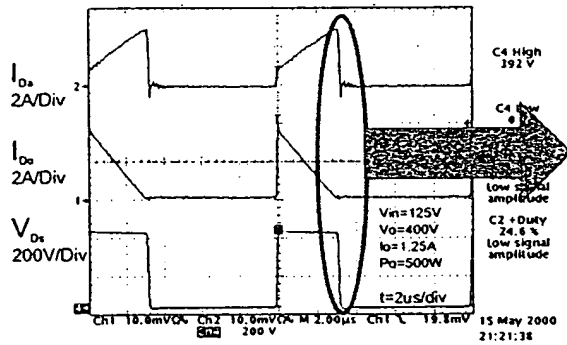


FIG. 9A

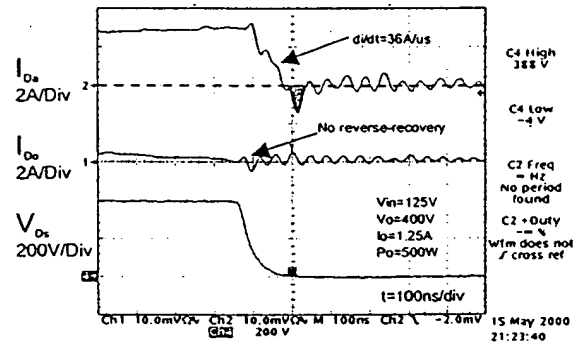


FIG. 9B

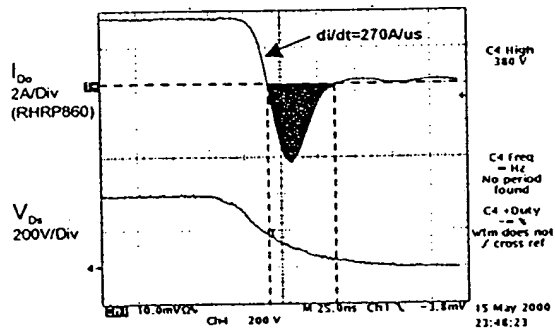


FIG. 10A
(PRIOR ART)

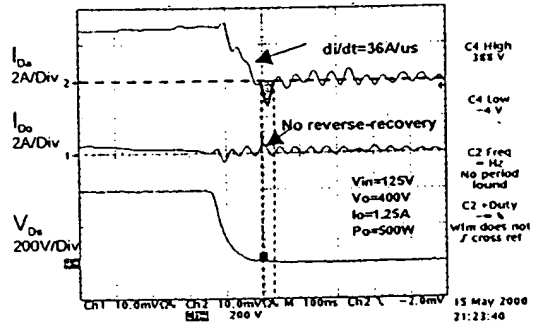


FIG. 10B

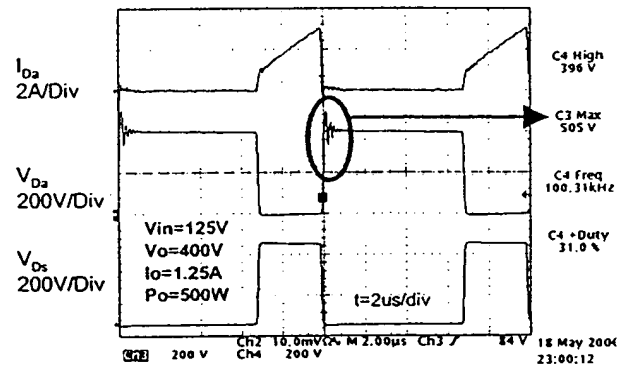


FIG. 11

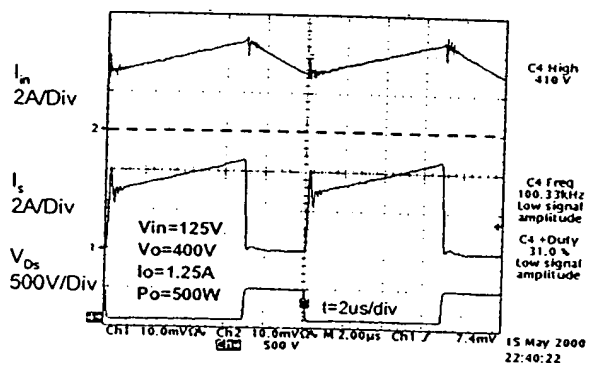


FIG. 12

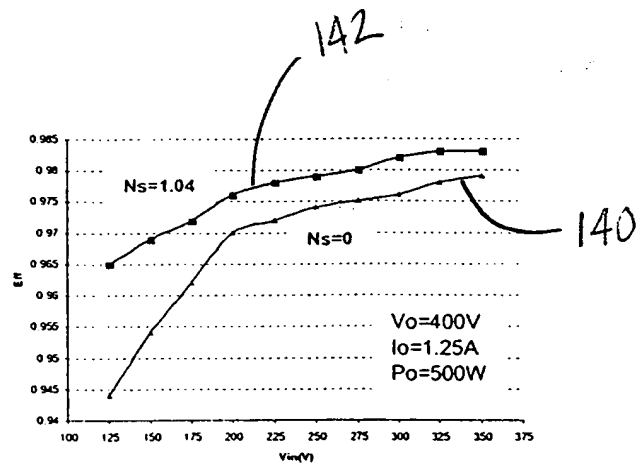


FIG. 13

TOP SECRET

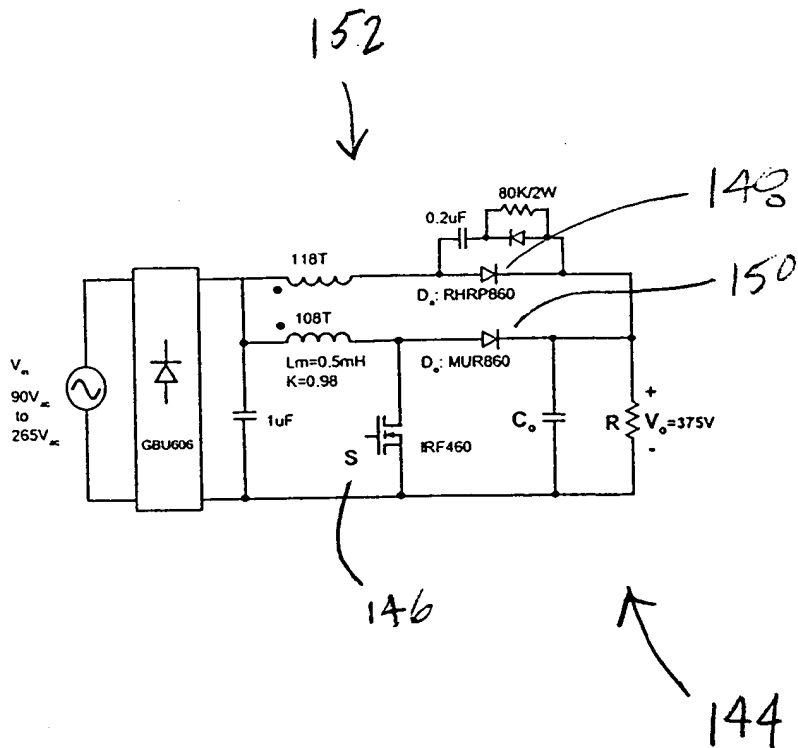


FIG. 14

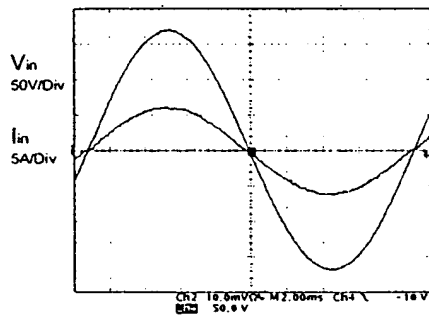


FIG. 15A

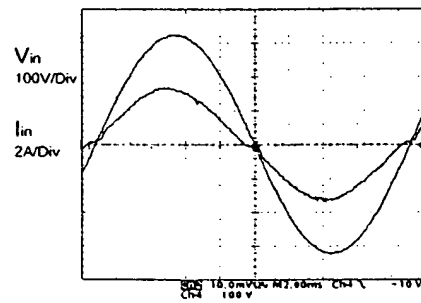


FIG. 15B

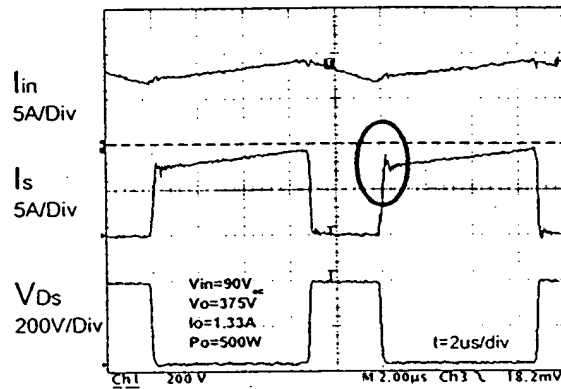


FIG. 16

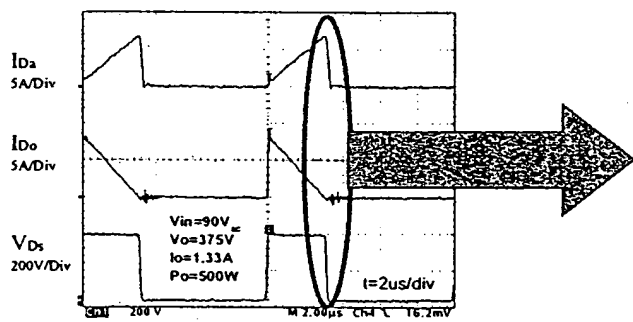


FIG. 17A

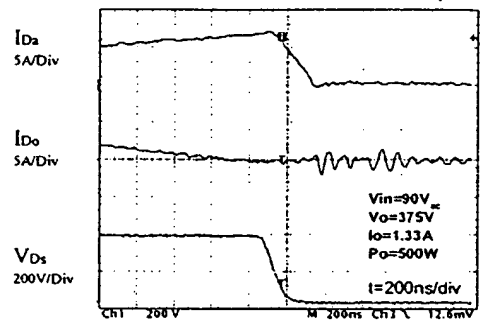


FIG. 17B

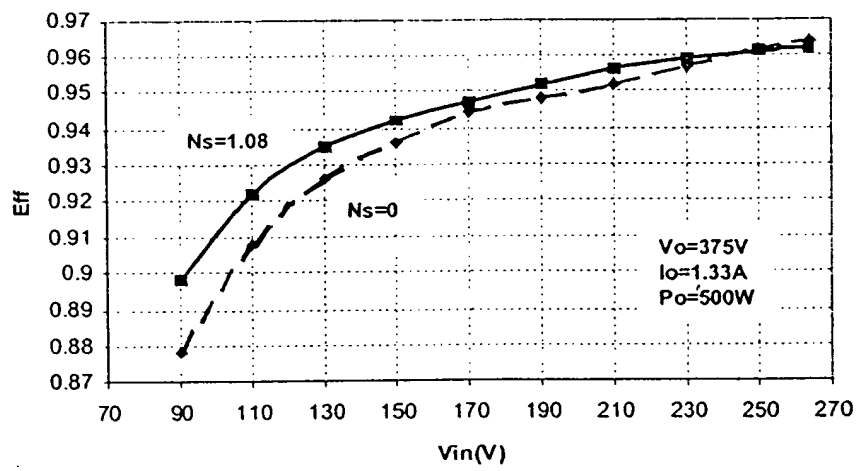


FIG. 18

154 →

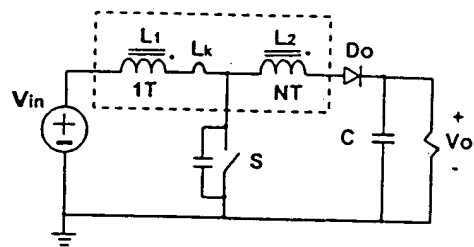


FIG. 19
(PRIOR ART)

The diagram shows a power converter circuit. It includes an input voltage source V_{in} connected to a transformer with primary inductance L_1 and leakage inductance L_k . The transformer has a turns ratio of 1T. The secondary side of the transformer has inductance L_2 and is connected to a diode rectifier with a diode D_o and a filter capacitor C . The output voltage is V_o . The circuit is labeled with various reference numerals: 16, 18, 20, 24, 26, 160, 162, 164, 165, 166, 168, 170, 172, 174, 176, 180, 182, 184, and 186. The transformer is enclosed in a dashed box labeled 170. The diode rectifier is enclosed in a dashed box labeled 174. The filter capacitor is labeled 176. The output voltage is labeled 186. The input voltage is labeled 160. The transformer is labeled 162. The diode is labeled 164. The capacitor is labeled 165. The output is labeled 166. The input is labeled 168. The transformer is labeled 170. The diode is labeled 172. The capacitor is labeled 174. The output is labeled 176. The input is labeled 180. The transformer is labeled 182. The diode is labeled 184. The capacitor is labeled 186. The output is labeled 188.

FIG. 20

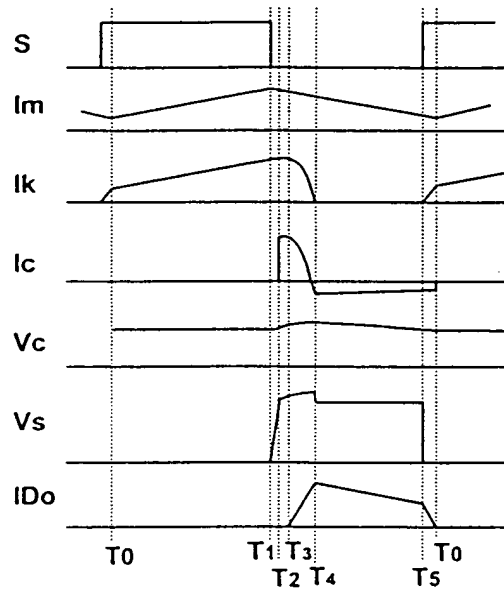


FIG. 21

FIG. 22A

FIG. 22B

FIG. 22C

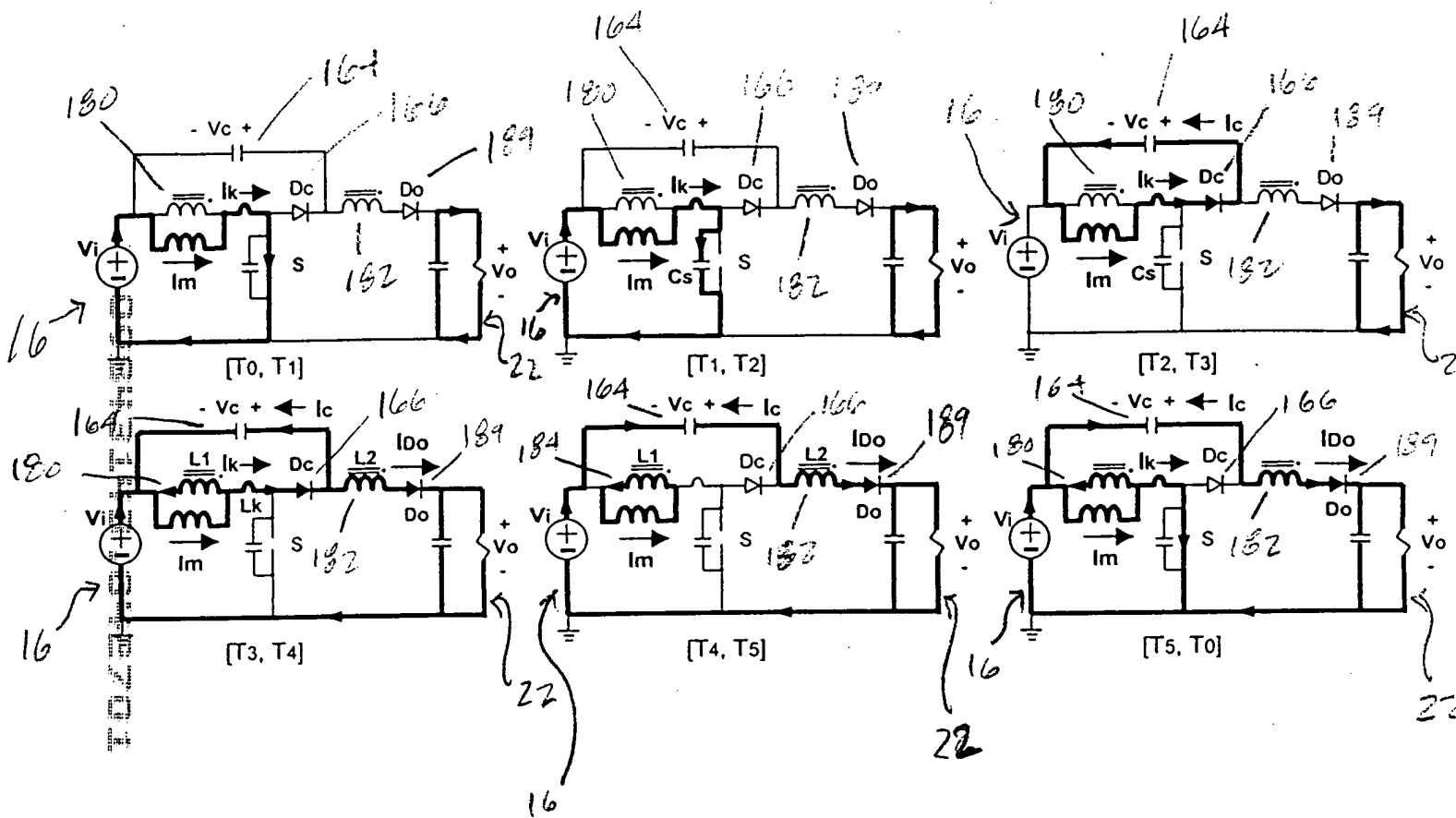


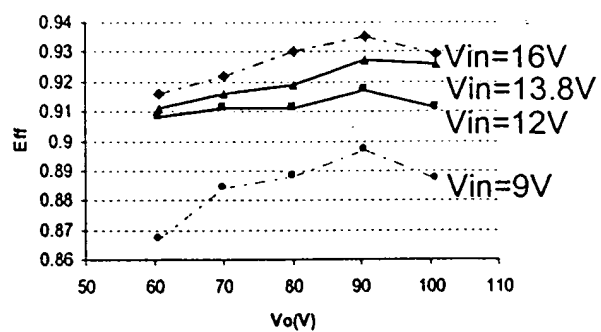
FIG. 22D

FIG. 22E

FIG. 22F

V_c
 10V/Div
 0
 V_s
 20V/Div
 I_{do}
 1A/Div
 $V_{in}=12V, V_o=100V, P_o=35W, F_s=105KHz$

FIG. 24



F16.25

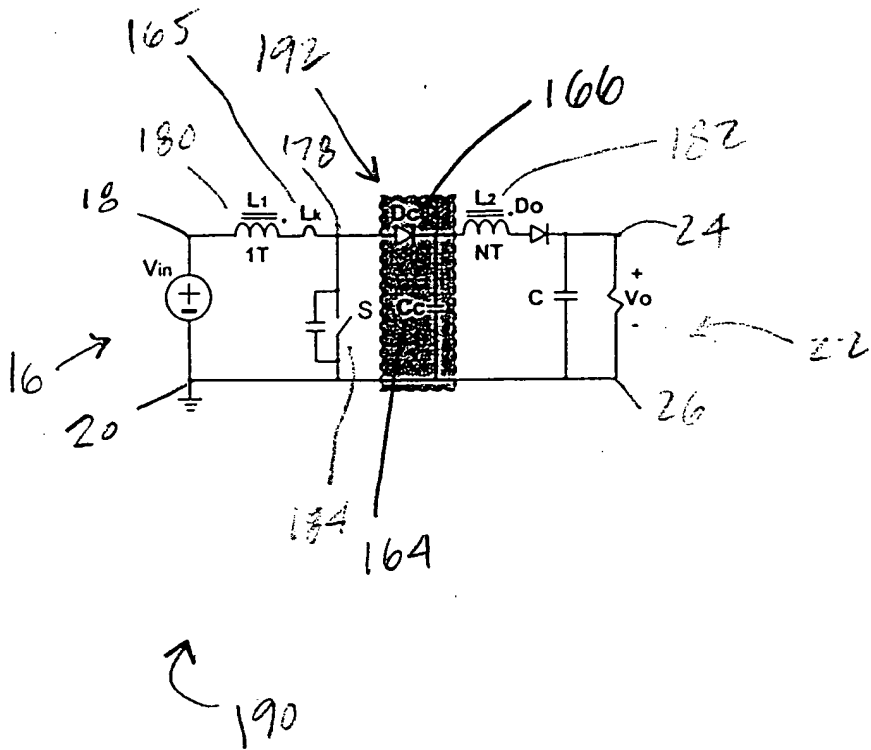
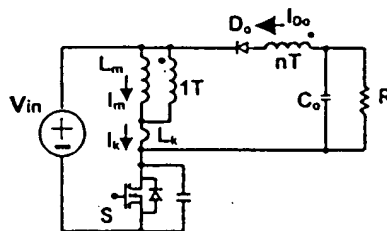


FIG. 26



194 ↗

FIG. 27
(PRIOR ART)

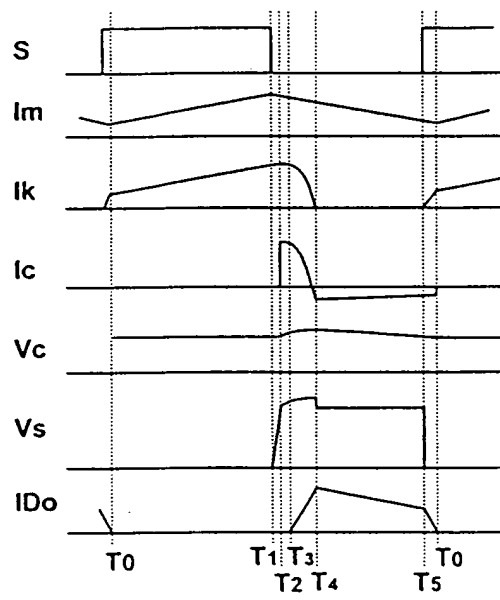


FIG. 29

FIG. 30A

FIG. 30B

FIG. 30C

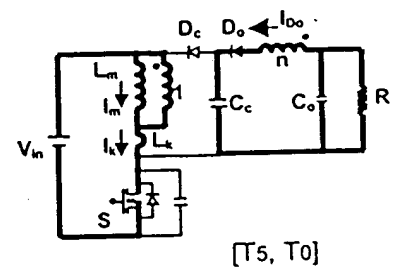
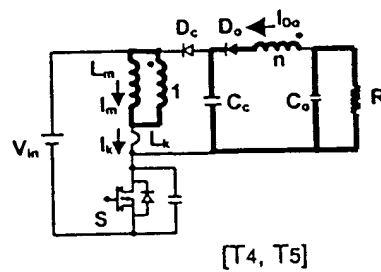
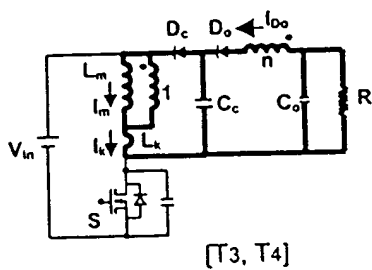
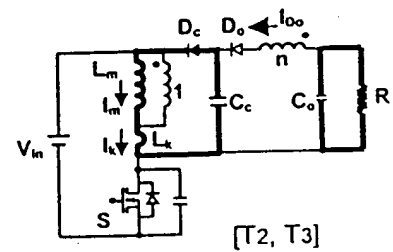
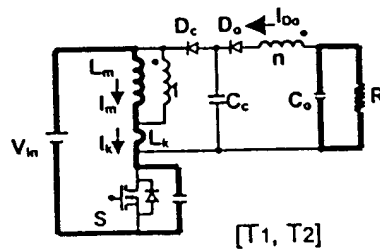
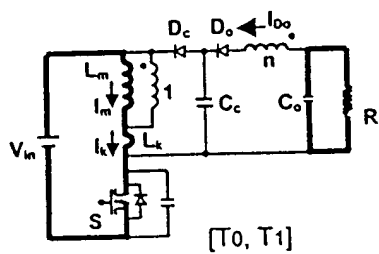


FIG. 30D

FIG. 30E

FIG. 30F

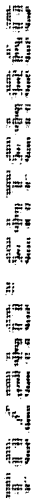


FIG. 32

FIG. 32

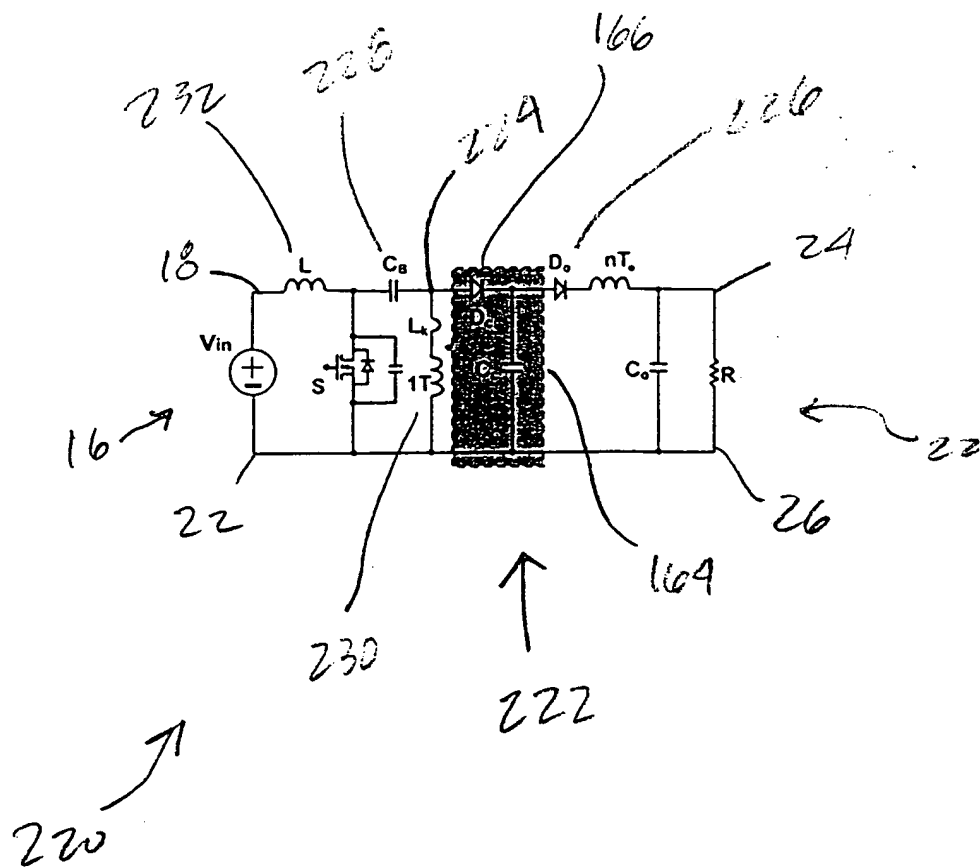


FIG. 33

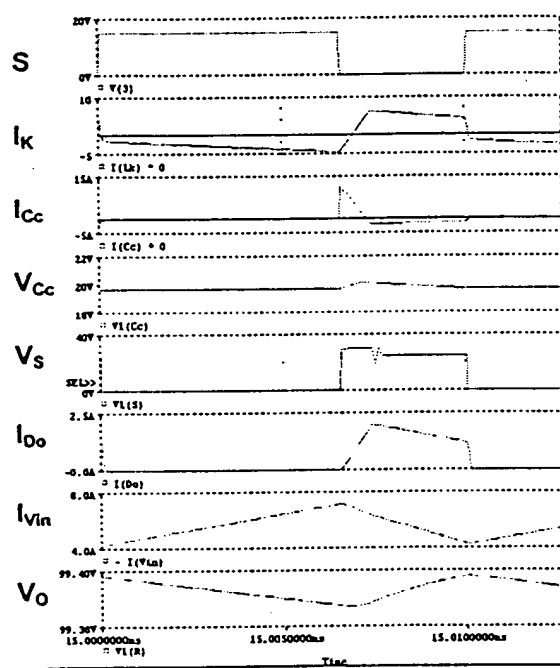


FIG. 34